PRE-COURSE WORK ASSIGNMENT

COURSE:	Fire Program Management, M-581
LESSON:	D - Interdisciplinary Teams
UNIT:	2 - Policy/Planning
SUGGESTED TIME:	1/2 hour
EQUIPMENT:	None
MATERIALS:	2 - D Pre-course Work Assignment
OBJECTIVES:	Upon completion of the pre-course work, participants will be able to actively participate in class discussions on Interdisciplinary Teams and receive answers to questions.

ACTIVITY
Reading

A. INTRODUCTION
This pre-course reading assignment is to familiarize you with the interdisciplinary teams and prepare you to be able to discuss them in class.

B. ASSIGNMENT
Read the following and be able to discuss in class.

FIRE PROGRAM MANAGEMENT, M-581
INTERDISCIPOLINARY TEAM PROCESS
Pre-work Reading Assignment

I. INTRODUCTION - TYPES OF PLANS

Plans and planning efforts come in all shapes and sizes. Plans can be as small as your grocery list or something as large as a plan for nuclear defense. We are going to explore some of the ways you - as a Fire Program Manager (FPM) - will become involved in planning for the management of our country's natural resources.

As FPM, you are likely to be a member of an interdisciplinary team, or have an ID Team under your supervision, who will be working to complete an analysis that includes the use of prescribed fire or other fuels treatments. Your knowledge of the planning process and your ability to participate as an effective ID Team member will to a large extent determine your effectiveness as an FPM.

A. Regional - Provincial Plans

Regional plans encompass large geographic areas, thousands of square miles and generally deal with issues of a continental or regional scale. Examples of ecosystem processes and functions that should be evaluated at a regional scale include air quality, water quality, weather, aquatic systems, fire regimes and risk, corridors, species viability, fragmentation, habitat relationships, and community viability.

Example: Interior Columbia River Basin Ecosystem Management Plan and depleted salmon stocks. Issues include management of the Columbia River dam system, forest rangeland management practices throughout the interior northwest, and commercial, recreation and Tribal use of the fisheries.

Cross many political and administrative boundaries.

- Federal, State, and Local (County and City).
- FS, BLM, NPS, FWS.
- Tribal jurisdictions.

B. Sub regional Plans

Smaller in scope than regional plans but still very large land areas are analyzed. Still dealing with all the issues of the regional scale but now look at more local effects such as travel linkages, insects and pathogens, nutrient cycling, and vegetation succession (community structure and composition). These analyses are usually initiated by federal land management agencies in response to issues driven by legal concerns, such as the Endangered Species Act.

Example: The Northwest Forest Plan addresses management of spotted owl habitat. Describes impacts to regional, state and local economies. Describes forest management implications for fish, spotted owls and other late-successional species. Also addresses water quality issues.

C. Individual National Forest Plans or BLM and Park Service

Resource Management Plans are the smallest units of consideration in the sub region hierarchical classification. This scale of planning is likely the broadest scale you will be involved with on a regular basis. For the various agencies this scale of planning is represented by:

1. Forest Service - Forest Plan (Land and Resource Management Plan).
2. Bureau of Land Management - Resource Management Plan.
3. National Park Service - Resource Management Plan.
4. Bureau of Indian Affairs/Tribal - Forest Management Plan.

Other political and administrative jurisdictions are involved but the planning effort is usually initiated by the federal land management agency. Other federal, state and local agencies are consulted.

These plans provide direction for management of land areas through broad application of management direction. Management direction for specific land areas is usually tempered by area-wide application of “standards and guidelines” which outline the rules under which the area will be managed.

D. Landscape, Watershed, or Integrated Resource Analyses

This process is a major cornerstone of ecosystem management. It is an inventory and analysis process that provides a list of potential projects that require NEPA analysis. Analysis area is one to several watersheds in size. Issues and ecological processes drive selection of analysis area. Defines existing conditions. Defines "Desired Future Conditions" within the context of the guiding document, either a Forest Plan or Resource Management Plan. Proposes projects that will move from the existing condition toward the desired future condition. Involvement in this process is probably the most important area of contribution to the successful implementation of ecosystem management for resource area, conservation district, park, ranger district, or forest level fire management officer.

E. Land Unit or Project Plans

This is the scale of analysis for consideration of typical projects. National Environmental Policy Act (NEPA). NEPA requires that a proposed project and its alternatives be analyzed in the context of its site-specific impact. Usual scales are 10's to 1,000's of acres. If wider ranging considerations are present, then the cumulative effects and connected action discussions may reference the Resource Management (Forest) Plan and/or the Integrated Resource Analysis. A NEPA decision document is needed to implement the project.

If you have questions about whether a project falls under NEPA regulations, there should also be staff in your organization that could help answer your questions.

II. INTERDISCIPLINARY TEAMS (ID TEAMS)

Section 102 of NEPA requires that all federal agencies shall:

- Utilize a systematic, interdisciplinary approach that will insure the integrated use of the natural and social sciences and the environmental design arts in the planning and in decision making which may have an impact on a person's environment.

Using an interdisciplinary approach insures integration of all-important features of the analysis (issues, data-gathering needs, alternatives, etc.) throughout the NEPA process. Because NEPA analyses are scientific, objective, and high quality, they must be performed by individuals with credentials appropriate to the issues (1502.6). Members of the interdisciplinary team may come from the specific agency unit, but also other federal, state, and local agencies or tribes. Non-agency individuals may also provide additional insights.

ID Teams may be small due to project or unit size. This is fine as long as one or two specialists are consulting with a number of sources, staff (including maintenance, operations, wildlife, etc.), and non-agency individuals to assist in making informed NEPA-based decisions.

ID TEAMS consist of:

1. Team leader.
2. Core team members.
3. Outside contributors.
4. Document writer/editor.

5. Managers responsible for member's time & funding.

The role of natural and cultural resource specialists on an ID TEAM:

- Develop preliminary alternatives.
- Brainstorm approaches.
- Evaluate effectiveness.
- Evaluate possible environmental and social effects.
- Develop necessary mitigation measures.
- Reviews purpose, need, and desired future conditions of project/problem.

Possible members of an ID TEAM depending on the project:

Air quality manager
Wildlife biologist
Natural resources manager
Archeologist
Engineers
Landscape architect
ADA compliance officer
Trails supervisor
Ecologists
Concessions representative
Hydrologist
Botanist
Wilderness coordinator
Cultural resource advisor
Historical architect
Safety Officer
Vegetation Expert
Law enforcement specialist
Silviculturists

III. FIRE PROGRAM MANAGER'S ROLE IN THE INTERDISCIPLINARY PLANNING PROCESS

Fire Program Managers or their representatives on interdisciplinary teams have the opportunity to propose, develop and implement projects that provide benefits for fire suppression, fuels reduction and fire re-introduction into fire - adapted ecosystems. Fire managers have the unique ability to understand the concerns and conflicts of many resources. This ability makes a fire manager a valuable asset to an interdisciplinary team. Take the time to understand other resource concerns. Help the entire team understand your concerns. Work with the team to minimize conflicts between resource concerns and resource specialists.

IV. PARTICIPATION IN AN INTEGRATED RESOURCE MANAGEMENT ANALYSIS EFFORT AS AN ID TEAM MEMBER

As a Fire Program Manager, your knowledge of fire behavior and fire effects provides valuable insights into one of the most pervasive and influential disturbances on wildlands. Our understanding of the effects of disturbance or the lack of disturbance is key to managing healthy, sustainable ecosystems. The fire specialist or program manager must be able to interact successfully with ecologists, biologists, archeologists, soils scientists, silviculturists, and line officers. You must be able to speak their language and they, yours. You must be aware of, and have an appreciation for, others' points of view. You must be able to articulate your knowledge to others.

V. PROJECT LEVEL PLANNING PROCESS STEPS

Step 1 - Locate the Area

1. Project areas should have identifiable boundaries and be locatable on photos and maps. Project areas are administrative delineations based upon human dimensions and use patterns as well as physical and biological factors. They may cross ownership boundaries.
2. Prioritize the project areas for analysis. Possible criteria for prioritizing include: Areas with resource conflicts, high public interest, high commodity production, high recreation potential, where monitoring has shown past actions were ineffective or there is a need for additional actions, with rare or sensitive components, where monitoring has shown diversity or productivity has been lost, impacted by natural disasters, epidemic insects and diseases, where health and safety are at risk, or not fulfilling Forest or Resource Management Plan goals and objectives.

Descriptive Parameters

These descriptive parameters are very important. They should be based on preliminary scoping and issue identification that came out of the exercise you went through during the project area selection process. Possible parameters might include:

Human parameters:
Community stability.
Sense of remoteness.
Health and safety concerns related to wildfire and urban interface.
Access to public land for public and firefighters.

Production potential:
Sustained wood products.
Dispersed non-roaded recreation opportunity.
Effects of insects and disease.

Physical/biological characteristics:
Vegetation types and response to fire.
Vegetation age class and structure.
Fire regimes.
Fire history and intensity.
Current fuel models.
Erosion potential.
Sensitive species and/or habitats.

Step 2 - Describe Existing Conditions

What is the area like now? Gather and describe existing and “historic” human dimension, production, and physical/biological conditions for the area selected.

Information sources could include:
1. Forest or Resource Management Plan.
2. Members of the public.
3. University or private sector experts.

4. Environmental documents.
5. Inventories and surveys.
6. Fire history maps.
7. Field investigations.
8. Literature.
9. Files, geographic information systems, photos.
10. Management plans, conservation strategies, recovery plans.

Surveys and inventories should be conducted at a level that will provide the information needed to determine the existing condition for a given descriptive parameter.

Field trips with the ID Team and with the public are productive at this step to validate and familiarize everyone with existing conditions.

Use the technology available to you. Turn boring tables and inventory sheets into visual displays of conditions. The fire specialist has a real opportunity here to act as liaison among many specialists that have a piece of the puzzle and to bring the pieces together in a pattern that makes sense.

Use GIS and other technology to evaluate vegetation and fire history as it was and is influenced by humans. How does that influence affect wildlife and fish habitat? How are grazing resources influenced by past and present fire occurrence?

Use fire behavior models to simulate fire sizes, intensities and effects of past, present and future fires. The use of FARSITE and other visual displays will help you present your information so that it can be understood and useful to the other ID Team members.

Estimate historic conditions for the appropriate descriptive parameters. Fire management specialists should be sure to interact with archeologists here to determine past human influence on the vegetation and habitat we see today.

Historic conditions are useful for understanding ecosystem forces and disturbance frequencies that have shaped the existing condition and helped define the historic range of variability.

Literature and research may provide information on historic conditions, but many qualities may have to be estimated.

The inventoried existing conditions and the estimated historic conditions for the descriptive parameters should provide the basis for the analysis team to estimate the capability and sustainability of the project area.

An estimate of the capability and sustainability of the area is the basis for defining Desired Future Conditions and suggesting possible management practices.

Step 3 - Describe Desired Future Conditions

What should the area be like? Describe desired human dimensions, resource production, and physical/biological conditions for the project area.

The desired condition description should be in the same terms - preferably measurable - that were used to describe the existing and historic conditions. An example would be:

- 40% of the area in fire tolerant brush species.
- 20% of the area in a wide array of aspen age classes.
- 10% of the conifers in north facing drainages over 200 years old.
- 30% of the area in various age classes of mixed conifers.

Use available technology. Combine fire modeling techniques with GIS capabilities to look at various disturbance scenarios and what those do to other resources such as Wilderness areas or Threatened or Endangered species habitat.

The fire specialist has to represent and interpret the single most important disturbance force on most of our wildland areas. Whether fire is excluded, managed or encouraged there are profound and lasting effects on many resource values.

The desired condition should be sustainable over time. If it is not, this should be displayed during the analysis process. Evaluate sustainability by relating desired condition to historic range of variability and existing fire regimes. The assumption is that conditions within the historic range of variability are sustainable.

Desired conditions are developed from the Resource Management Plans, public participation, previous environmental analyses, descriptions of existing and pre-Columbian conditions, and from estimates of ecosystem capability, sustainability, and variability.

Desired conditions descriptions are essentially the management goals for the areas selected.

The rationale for describing the desired conditions should be well documented in the process record. Good documentation is always important.

Step 4 - List Possible Management Practices

How can the desired conditions be achieved? Develop a list of possible management practices, which will cause change from existing toward desired conditions.

Compare or overlay the existing and desired conditions. Where existing and desired conditions do not match, there are management needs and opportunities.

Develop a list of possible management practices, which would change existing conditions toward desired conditions. This is an excellent opportunity to examine and validate the management emphasis and prescriptions for the area that are identified in your Resource Management Plan or Forest Plan.

Does your newly identified desired condition coincide with that identified in the guiding plan? If not - why not?

Does your desired condition need to be reevaluated or does the plan need amending?

Prioritize the list of potential proposed actions. Things to consider during prioritization:

1. Legal mandates - is a particular action required by law?
2. Administrative mandates - is an action needed to meet agency regulation or direction?

3. Technical feasibility - can this practice be done with available skills and equipment?
4. Social feasibility - can sufficient agreement be obtained at reasonable expense from individuals and/or groups who oppose the practice?
6. Economic feasibility - is the practice affordable? Do receipts and costs make good sense? Is the practice the most efficient location and way to meet objectives and resolve issues?

Use the prioritized list to group practices that would be connected actions, similar actions, possible categorical exclusion, or other logical groupings.
The list of prioritized, grouped, possible practices should be included in databases for use in the program planning and budgeting process!! Use of possible management practices, generated through the integrated resource management analysis process, is the way to build an ecosystem management program.